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Reserve BOOK NUMBER A464.02 P69 UNITED STATES DEPARTMENT OF AGRICULTURE U.S. BUREAU. OF PLANT INDUSTRY:

Division of Gereal Crops and Diseases

The Agricultural Experiment Stations
of Illinois, North Carolina, and Purdue
University (Indiana)
cooperating

 ${\it 3}$ reaction of wheat varieties, selections, and hybrids to mosaic and mosaic-rosette ${\it //}$



Washington, D. C.
May 24, 1935



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UNITED STATES DEPART ENT OF AGRICULTURE Bureau of Plant Industry

REACTION OF WHEAT VARIETIES, SELECTIONS, AND HYBRIDS TO MOSAIC AND MOSAIC-ROSETTE

Tests Conducted Cooperatively with the Agricultural Experiment Stations of Illinois, North Carolina, and Purdue University (Indiana)

By H. H. McKinney, Senior Pathologist, Division of Cereal Crops and Diseases

INTRODUCTION

No data on the resistance and susceptibility of wheats to rosette have been published since 1923. Since that time field tests have been conducted with additional varieties, selections, and hybrids.

The results of controlled experimental work indicate that at least two distinct viruses are involved in the wheat mosaic which occurs east of the Mississippi River and there is reason to believe these are usually found together. One of these viruses induces a green mosaic and rosette on Harvest Queen wheat, whereas on certain other varieties this virus induces a green mosaic or a yellow mosaic, depending on the variety and the environmental conditions. The second virus does not induce rosette in any variety, so far as known, but it induces a severe yellow mosaic on suitable differential varieties.

METHODS

The tests were conducted in the field. All sowings, including the spring varieties, were made in the autumn in soil on which mosaic wheat had grown previously. At the Arlington Experiment Farm, Rosslyn, Va., the infested soils used were shipped from the infested areas near Granite City, Illinois, and near Wanatah, Indians. The slight mosaic infestation which occurs naturally at the Arlington Farm was controlled by disinfecting the soil in all plots with formalin before introducing the soil from Illinois and Indians.

Each variety, selection, or hybrid was usually sown in a single row but in some cases more rows were sown. In the early tests the rows were l rod long, but in later tests it was found that rows 4 feet long were satisfactory in heavily infested soil.

Harvest Queen wheat known to be highly susceptible to mosaic-rosette was sown at the beginning and in every tenth row throughout a nursery to serve as a control for soil infestation. In later tests Nittany or Red Winter spelt were also used as controls, as these are highly susceptible to yellow mosaic. The data for the controls are recorded in two figures, the first representing the lowest and the second the highest percentage of plants infected in the several rows in each experiment.

In the earlier reports of field tests only the rosette symptoms were considered but in this report mosaic is also given consideration, and an attempt is made to distinguish roughly between yellow and green-mosaic symptoms. At best, however, it was found impracticable to attempt more than a rough segregation of the symptom expressions in the field.

The capital letter "T" in the data columns denotes a trace or less than 1 per cent of disease. The plus signs in the data columns for 1924-25 at Granite City indicate the presence of mosaic mottling. Owing to injury caused by a grass fire in an adjoining field and by a severe winter it was not feasible to express these data in percentages. The abbreviations "Gr. Mos. and Yel. Mos." stand for groon mosaic and yellow mosaic, respectively.

PERSONNEL

Scod was supplied by C. E. Leighty, formerly in charge of eastern wheat and rye investigations, in the Division of Gereal Grops and Diseases, by John H. Parker, of the Kansas Agricultural Experiment Station, and by workers in the cooperating agricultural experiment stations.

Sowings were made and data were obtained in Illinois by Benjamin Koehler, Department of Asoronomy, Illinois Asoricultural Experiment Station, R. W. Webb, formerly in the Division of Cercal Crops and Diseases, and the writer; in Indiana by J. B. Kondrick, formerly in the Department of Botany, Purduc University Asoricultural Experiment Station, R. W. Webb, and the writer; in North Carolina by S. G. Lehman, Department of Botany, North Carolina Agricultural Experiment Station, and the writer; and in Virginia by the Writer and assistants. C. E. Leighty assisted in the tabular arrangement of the varieties and in the editing.

REMARKS

It is not the purpose of this report to recommend varieties; however, it should be pointed out that varieties which express grown mosaic but which do not express resette soldem if ever show appreciable damage that can be attributed to the disease. Cortain strains of Fulcaster and of Fultz serve as examples.

Varieties expressing high percentages of rosette show much injury, followed by a low yield or a complete loss of the crop.

Yellow mosaic frequently induces severe injury, followed by a greatly reduced crop or no crop at all. Variaties showing high percentages of yellow mosaic should be avoided.

In old established varieties there are many selections and local strains which differ in their reaction to mosaic. This is illustrated in the data presented for Fulcaster, Fultz, and Rod May. Some of the strains may carry the name of the established variety, whereas others may carry new names. In making recommendations this should be kept in mind in order to avoid misunderstandings with growers.

Note: These data are not to be published without the consent of the cooperating agencies.

Reaction of wheat verieties, selections, and hybride to mosaic and mosaic-rosette

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Reaction of wheat variaties, selections, and hybrids to mosaic and mosaic-rosette

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| plestraw | 1957 6975 | | | | | - | | - | | - | - | - | _ | _ | _ | | 0 | 0 | 100 | _ | _ | - | _ | - | _ | _ | - | - | - | - |
| May | 5635 | | - | - | _ | - | - | - | 0 | 9 | 0 | - | - | - | - | | 0 | 0 | 25 | - | - | - | - | - | - | - | - | - | - | - |
| May | 5339 | | - | - | 0 | T | 0 | + | - | - | - | - | - | - | - | | | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Mayı | h-mm | | | | | _ | | | | | | | | | | | | | | | | | | | | | | | | _ |
| rly Harvest rly Ripe | 4852 5319 | | - | - | 0 | 35 | - | | - | - | - | | | _ | - | | | | - | | _ | - | | | - | | | - | - | - |
| terprise | 3399 4864 | | - | - | 0 | 22 | _ | - | _ | _ | - | - | - | _ | - | | - | - | - | _ | - | - | - | - | - | - | - | - | - | - |
| chigen Amber | 4864 | | - | - | 0 | 7 | - | - | - | | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| chigen Amber | 6985 | | - | - | - | - | 0 | * | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| chigen Amber chigan Wonder | 6989 | | - | - | 0 | 35 | 0 | * | - | - | - | - | - | _ | - | | _ | _ | _ | | _ | _ | _ | - | | | | | _ | - |
| higan Wonder | 5550 | | - | - | - | 22 | 0 | + | | _ | - | - | _ | _ | _ | | | - | _ | - | _ | _ | - | _ | _ | - | - | - | - | - |
| mge | 5321 5589 4868 | | - | - | 0 | 7 | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| ide of Indiana | 3492 | | - | - | o | T | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 1 Cross | 3579 | | - | - | 0 | T | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - |
| A Crose Rock | 5318 | HR 329 | - | - | 0 | 35 | - | - | | - | | 0 | 0 | 0 | 0 | 0 0 | | 0 | 10 | - | - | - | | | - | | - | - | - | - |
| Rock: | 5597 | ша 34-7 | - | _ | _ | - | - | - | 0 | T | 0 | - | - | _ | | | _ | | - | - | - | - | - | - | - | - | - | - | - | - |
| | | Sel. 401-1 | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | | - | 0 | 10 | 0 | - | - | - | - | - | - | - | - |
| | 5656 | | - | - | 0 | 7 | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | | - | - | - | - | - |
| | 5656 3512 5735 | | - | - | - | - | 0 | + | 2 | 12 | 0 | - | - | - | - | | | - | - | - | - | - | - 1 | | - | | | | - | |
| | 5735 | | - | - | - | - | - | - | _ | | - | - | - | | - | - | | - | - | | | | _ | | | | | | | |
| rest Queen (control) | | Edwardsvills, Ill. | 9−75 | 7-75 | 85-99 | 55-99 | 7-95 | 9-98 | 99-100 | 99-100 | T 5 | 0-98 50 | -98 ⋅ | T 3 | 30-100 3 | 0-100 7 | 5-1 | 00 5-10 | 0 5-10 | 0 100 | 100 | T | 50-10 | 00 50-10 | T | 65-100 | 65-100 | T 6 | 0-100 6 | 60-100 |
| teny (control) | 6882 | | - " | - | - | | - | - | 0 | 25-50 2 | 5~50 | 0 48 | <u>-50</u> 48 | -50 | 0 | 5-50 5-5 | | - | - | - | - | - | - | - | | 0 | 20-25 | 60.70 | 0 2 | 20.25 |
| Winter spelt (control) | 1772 | | - | - | - | - | - | - | 0 | 25 | 75 | - | | - | - | | 0 | 25-35 | 50-65 | 0 | 25 | 75 | - | - | - | 0 | 20-27 | 00-15 | 0 2 | 20-25 6 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Reaction of wheat verieties, selections, and hybrids to mosmic and mosmic-rosette

| | 1 1 | 1 | Wanstal | a, Ind. | : | | | Gran | lte Cit | y, Illi | nois | | | | : : | Lexingt | on, Fo | rth Car | olina | | : | Rose | lyn, V | irginis | | |
|---|--------------------------------------|-------------------------------------|--------------|-----------|------------|----------------|--------------|-------------|---------|---------|------------------|------------|----------------|------------------|-----------------|----------------|--------|----------|---------------------|------------------|------|---------|------------------|---------|---------|--------------|
| Cleee, Varietiee, Selections and Hybride | : C.I. | : Sslection No., : Stete No., or | 192 | 2-23 | 192 | 2-23 | 1924 | ⊢ 25 | : | 1929-30 |) | 1 | 930-31 | | 1 1 | 930-31 | | <i>t</i> | 1931-32 | 2 | : | 1927-28 | : | 1 | 928-29 | |
| | 1 | : eource | : Ros- | Hos- | Ros- | : Mos- | : Ros- : | Mos- | Ros- | : Gr. | : Yel. : Mos. | Ros- | Gr. Mos. | : Yel. : Mos. | : Ros- : | Gr. | Yel. | : Roe- | : Gr. : Mos. | : Yel. : Noe. | Ros- | : Gr. : | Ysl. : Moe. : | Ros- : | Gr. : | Yel. Noe. |
| SOFT EED WISTER VARIETIES | | | * | * | * | * | * | * | * | * | 5 | * | 5 | * | \$ | * | * | - 5 | \$ | * | * | 5 | * | * | \$ | 5 |
| Red Wave Shepherd | 6967 6163 | | - | - | - | - | _ | - | - | - | - | - | - | - | - | - | - | - | - | 10 | - | - | - | 0 | 0 | 5 |
| Shepherd's Perfection Shepherd's Prolific | 6984 | | - | - | - | - | 0 | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | _ | - | 0 | 0 | 0 |
| Triumph Trumbull | 3519 3134 5657 3554 4140 | | | - | 0 | T | - | - | 0 | - 6 | - 0 | 0 | 0 | - 0 | - 0 | - 3 | 0 | 0 | - 0 | 50 | - | - | - | _ | - | - |
| Tule Tule | 3554 4140 | | _ | _ | 0 | T | _ | _ | _ | - | - | - | _ | - | _ | - | _ | _ | _ | Ξ | - | _ | - | - | - | _ |
| Ulta No. 834 Valley Valley: | 5747 5658 | Sel. 471-2-6-1 | - | - | - | - | 0 | + | - | - | - | 0 | 0 | 0 | 0 | 2 | 0 | 0 | Ŧ | 5 | - | = | - | = | - | - |
| Indiena Swamp Indiena Swamp | 3334 4834 | | T 5 | T 5 | 98 T | 98 98 | 0 | 100 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | _ | - | - |
| Wingara V. P. I. 131 | 5307 10047 | | ź | É | 0 | 10 | 0 | + | 2 | 5 | - | 0 | - | - | - 0 | - T | 0 | _ | _ | - | 7 | 7 | 0 | _ | - | - |
| Wharten Wheedling | 10071 | | - | _ | 0 | 35 60 | _ | _ | 0 | 50 | 0 | - | - | Ė | - | _ | _ | _ | _ | _ | _ | _ | _ | - | Ξ | = |
| Winter Chief | 4878 | | - | - | 0 | 60 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| COMMON WHITE WISTER VARIETIES Gold Coin | | | | | | _ | | | | | | | | | | | | | | | | | | | | |
| Honor | 5355 6161 | | - | - | T | Ŧ | 0 | + | - | - | - | - | - | - | - | _ | - | - | - | - | - | = | - | - | - | - |
| Junior No. 6 White Winter | 6971 5219 | | = | Ξ | - | - | - | - | = | - | - | - | - | - | - | _ | - | - | - | - | 9 | 5 | 0 | | - | - |
| Harveet Queen (control) Bittany (control) Red Winter spelt (control | 6882 | Edwardsville, Ill | . 12-75 - | ±-75 - | 85-99 - | 85 - 99 | 1 –98 | T-98 | 99-10 | | 25-50 | 50–98 0 | 50-98 48-50 | ₹ 48–50 | 30 – 100 | 30–100 5–50 | | - | 5-100 - 25-35 | - | 100 | 100 | T - 75 | 50-10 | 0 50-10 | 0 T |
| med sinter spelt (control | 1772 | | - | - | - | - | - | - | 0 | 25 | 75 | - | - | - | - | - | _ | J | -7-37 | 70-07 | 0 | -) | () | | | |

Reaction of wheat varieties, selections, and hybrids to mosaic and mosaic-resetts

| Oranite City, Illinois Lexington, North Carolina | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------------------------|------------------------------|----------|--------|------------------|-------|---------|--------|------------------|--------|----------|----------|---------|---------|----------------|------|---------|--------------|--------|---------|------------------|--------|---------|---------|----------|---------|----------|--------|---------|--------|--------|---------|------------------|
| | 1 | : | ! | 0 | ranite | City, | Illinoi | 8 | | : | Lexing | ton, For | rth Car | olina | | : | | | | | | | Ross | lyn, Vi | rginia | | | | | | | | 1 |
| Class, Verieties, Selections and Hybrids | i Ro. | : State No., or | 1922 | | 1924 | | | 1930-3 | | : | 1930-31 | | | 1931-32 | | | 1927-28 | | | 1925-29 | | | 1930-31 | | 1 | 1931-32 | - | 1 | 1932-33 | : | 1 | 1933-34 | 1 |
| | : | t sourcs | : Ros- : | Mos- : | Ros- : atts ; | Mos- | t Ros- | : Or. | : Yel. : Mos, | : Ros- | : Or. | Yel. | Ros- | : Or. : | : Yel. : | Ros- | Or. : | Yel. Mos. | : Ros- | : Gr. | : Yel. : Mos. | : Ros- | : Gr. | : Yel. | : Roe. | : Or. | Yel. : | Ros. : | Or. : | Yel. : | Ros. : | Gr. : | Yel. : Mos. : |
| Hard Red Winter Varieties | | | * | * | 5 | 5 | - 5 | 5 | 5 | * | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | * | \$ | \$ | * | \$ | \$ | 5 | 5 | 5 | \$ | \$ | 5 |
| Altare Alton (Ohirka Winter) | 5797 | | - | - | - | - | 0 | 5 | 0 | - | - | - | - | - | - | + | - | - | - | - | - | + | - | - | - | - | - | - | - | - | - | - | - |
| Banat (Improved Banat) Beloglina | 3133 | (Ill. Sts.) | - | - | 0 | + | - | - | - | - | - | - | | - | - | - | - | - | - | - | _ | | - | _ | _ | - | _ | - | _ | - | - | Ξ. | |
| Beloglina Sel. | 8884 | (111. 5(8.) | - | - | - | - | 0 | 100 | 0 | _ | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | 1 | 1 | - |
| Blackhull Budapest | 6251 5789 | | 0 | 35 | 0 | - | 0 | 5 | 0 | - | - | - | 0 | 0 | 75 | - | - | - | - | - | - | - | - | - | 0 | 0 | 10 | - | - | - | 0 | 0 | 50 |
| Cheyenne Cooperatorka | 8885 8861 | | - | - | - | - | - | - | - | - | - | - | 0 | 0 | 68 | - | - | - | - | - | - | - | - | - | 0 | 0 | 10 | - | - | - | 0 | 0 | 75 |
| Cooperatorica | | Ean. 296779 | - | - | - | - | - | - | - | | - | - | 0 | 0 | 10 | - | _ | - | - | - | - | - | - | | 0 | 0 | 9 | - | | - | - | - I | - |
| Crimeen Darlington | 5569 | Ean. 2610 | - | 97 | - | - | 0 | 100 | - 0 | - | - | - | - | - | - 1 | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - 1 | - |
| Durabel Eagle Chief | 8860 8868 | | - | - | - | - | 0 | 100 | 0 | - | - | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | - | - | - |
| Early Blackbull Early Espred | 8856 | T | - | - | - | - | ō | 5 | 0 | - | - | - | 0 | ō | 63 | - | - | - | - | - | - | - | - | - | 0 | 0 | 3 | - | Ξ. | - | 0 | 0 | 95 |
| Eureka | 5170 | Kan. Sal. 252 | - 105 | - | 0 | 50 | - | 0 | 100 | - | - | - | _ | | - | - | _ | _ | - | - | - | - | - | - | - | | - | - | - | - | 0 | 0 | - |
| Fulhard Hillsboro | 8257 | (Kansas Sta.) | - | - | - | - | 0 | 0 | 0 | - | - | - | 0 | 0 | 10 | - | - | - | - | - | - | - | - | - | 0 | 0 | 8 | - | - | - | - | - | - |
| Hostianium Hussar | | Ean. 494 4843-1-1 | - | - | - | - | ō | 100 | ŏ | - | _ | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | Ξ., | - | - | Ξ., | = |
| Ilred | 8219 5146 | 4643-1-1 | - | | 0 | - | o | 65 | 0 | - | 98 | - | - | | - | - | 100 | _ | _ | - | - | | _ | | - | - | | - 1 | - | - | - | - 1 | - |
| Kenred Enarkof | 5146 2193 6686 | | - | 95 | - | - | 0 | 5 | 0 | - | - | - | 0 | 0 | 45 | 0 | 0 | 10 | 0 | 25 | 0 | 0 | 0 | 100 | 0 | 0 | 15 | 0 | 25 | 75 | - | - | 2 |
| Eherkof Eherkof | 6686 1442 | (Hays No. 2) | - | - | - | - | 0 | 5 | 0 | - | - | - | 0 | 0 | 75 | - | - | - | - | - | - | - | - | - | 0 | 0 | 20 | - | - | - | - | - | - |
| Energof Lincalel | 4897 | Ean. 2614 | 0 | 100 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | Ξ | - | - | | - |
| Malakof | 4898 | ESE. 2014 | 0 | 95 | 7 | + | - | - | - | - | _ | - | _ | | - | | - | - | - | - | - | - | - | - | - | - | | - | Ξ. | - | - | | - |
| Malakof Malekof | 6988 | (Sel. 131076) Kan. 496 | 0 | 7 | 10 | + | - | - | - | - | | - | - | - | - | - | - | - | - | - | | - | - | | - | - | - | - | - | - | - | - | - |
| Menno Wichikof | 6000 | Man. 496 | _ | - | - | - | 0 | 100 | 0 | - | - | - | - | + | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Minard Minturki | 6990 6690 | | - | - | 10 | + | - | | - | - | | - | | | | - | - | - | _ | - | - | - | - | - | - | - | - | - | Ξ. | - | - | .5 | .= |
| Hebraska No. 28 | 6155 5147 6250 | | - | - | - | - | - | 100 | - | _ | - | - | 0 | 0 | 90 75 30 | - | - 1 | - | 0 | 100 | 0 | - | - | | 0 | 0 | 10 30 | - | Ξ | - | - | 40 | 40 |
| Rebreaka No. 60 Oro | 6250 8220 | | | - | - | - | 0 | 100 | 0 | - | - | - 1 | 0 | 0 | 30 33 | - 1 | - | - | - | - | - | - | - | - | 0 | 0 | 10 | - | - | - | 0 | 0 | 50 |
| Padui Pasterboden | 6153 8266 | | 0 | T | 0 | + | - | - | - | - | - | - | - | - | - | - | - | + | - | - | - | - | - | - | - | - | + | - | - | - | - | - | - |
| P-1066 | 5879 | | - | - | 0 | | - | 77 | - | - | - | - | - | - | - | - | | - | _ | - | - | - | - | _ | - | - | | - | Ξ. | - | - | - | |
| P-1068 Quivira | 5880 8886 | | _ | - | - | - | - 1 | | - 1 | - | - | - | _ | _ | - | - | - | - | - | - | - | - 1 | - | | - | - | - | - | - | | 0 | 5 | 0 |
| Sedgwick Sherman | 8262 14430 | | - | - | - 0 | - | 0 | 100 | 0 | - | - | - | - | | - | - | - | - | _ | - | - | - | - | - | - | 5 | - | - | - | - | - | | - |
| Smitheonian Stepniatchka | 10022 8862 | | - | - | - | - | - | - | - | - | - | - | 0 | 0 | 90 | - | - | - | - | - | - | - | - | - | 0 | 0 | 7 | - | - | - | - | - | - |
| Super-hard | 8054 | | - | - | - | - | 0 | 5 | 0 | - | | | 0 | 0 | 77 | - | = | - | - | | - | | - | | ō | 0 | 15 | - 1 | - | - | | | - |
| Tennarq Turkey | 8054 6936 1558 6152 6982 | | _ | - | - | - | 0 | 5 | 0 | - | - | - | 0 | 0 | 85 75 | - | - | - | 0 | 50 | 0 | 0 | 0 | 90 | 0 | 0 | 10 | 0 | - 0 | 75 | 0 | 0 | 75 |
| Turkey | 6152 | | 0 | 97 | - | | - | | - | - | _ | - | - | - | - | - | | - | - | - | - | - | - | - | - | - | | - | - | - | - | - | - |
| Turkey | 6175 | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0 | 0 | 25 | - | - | - |
| Turkey | | Sel. Ill. Sta (Ill. Ste.) | | - | - | - | 0 | 10 | 0 | - | | - | _ | - | - | - | - | - | - | - | - | - | - | - | - | - | | - | - | - 1 | - | | |
| Turkey: World's Champion | 5971 | | | _ | 0 | | - | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | - | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ |
| Ukreinka Wisconsin Ped. Ro. 2 | 8859 6683 | | - 0 | 85 | - | - | 0 | 100 | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Yogo | 8033 | | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 0 | 75 | 10 |
| Harvest Queen (control) | 68.82 | Edwardsville, Il | 1.85-99 | 85-99 | 2-98 | 7-98 | | 50-98 | | | 0 30-100 | | | 0 5–100 | 5-100 | 100 | 100 | Ŧ | 50-10 | 0 50-10 | O T | 65-100 | 65–100 | T 6 | io-100 6 | 0-100 | Ť | 95-100 | 95-100 | 7 | 60-100 | 60-100 | T |
| Wittany (control) Red Winter spelt (control) | 1772 | | - | - | - | - | 0 | 46-50 | 48-50 | 0 | 5-50 | 5-50 | 0 | 25-35 | 50-65 | 0 | 25 | 75 | - | - | - | ō | 20-25 | 60-75 | 0 2 | 0-25 | 60-75 | 0 | 20-25 | 60-75 | ō | 20-25 | 60-75 |
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Reaction of wheat varieties, selections, and hybrids to mosaic and mosaic-rosette

| | : | | : | | | | | | Rossl | yn, Vi | ginia | | | | | | |
|--|-------------------------------|-------------------|--------|-----------------|------------------|--------|-----------------|------------------|------------------|------------------|------------------|--------------------|----------------------|----------------------------------|------------------|-------------------------|------------------|
| Class, Varieties, Selections and Hybrids | : C.I. : | Selection No., | : | 1926-27 | , | : | 1927-28 | | : | 1928-29 |) | : | 1929-3 | 0 | : | 1930-3 | 1 |
| | : | source | : Ros- | : Gr. : Mos. | : Yel. : Mos. | : Ros- | : Gr. : Mos. | : Yel. : Mos. | : Ros- : ette | : Gr. : Mos. | : Yel. : Mos. | : Ros- : ette | : Gr. : Mos. | : Yel. : Mos. | : Ros- : ette | : Gr. : Mos. | : Yel. : Mos. |
| HARD RED SPRING VARIETIES | | | % | % | % | % | % | \$ | % | % | % | % | 4 | % | % | g. | % |
| Haynes Bluestem Marquis Marquis | 3641 | (Minn. Sta.) | 0 | _ T _ | 0 | 0 | 5 | 0 | 0 0 | 0 0 | 100 100 | - 0 | - 0 | 100 | - 0 | - 0 | 100 |
| DURUM VARIETIES | | | | | | | | | | | | | | | | | |
| Marousní Mindum Pentad | 1593 5296 3322 | | - | - | - | - | - | - | 0 | 0 | 100 25 50 | - | - | = | - | - | = |
| WHITE SPRING VARIETIES Common | | | | | | | | | | | | | | | | | |
| Federation Bard Federation Sonora | 4734 4980 3 0 36 | | - | - | - | - | - | - | 0 | 0 0 100 | 75 10 0 | - | - | - | - | - | - |
| CLUB | | | | | | | | | | | | | | | | | |
| Coppei Hybrid 60 Hybrid 128 | 3088 5024 4512 | | 0 | 0 0 T | 0 | 0 0 | 5 5 75 | 0 0 | 0 | 0 | _ T | - | - | = | - | - | - |
| Harvest Queen (control) Witteny (control) Red Winter spelt (control) | 6882 1772 | Edwardsville, Ill | . 100 | 100 25 | <u>T</u> 75 | 100 | 100 25 | ± 75 | 50_10 | 0 50 <u>-</u> 10 | 00 1 | 70 ₀ 10 | 70-1 35-5 30-3 | 00 35 - 50 4 60-64 | 65-10 | 0 65 <u>-</u> 1 20-2 | - |

| Class, Varieties, Selections | Source of Seed | Wanatah, | ina. | | Gran | ite Cit; | 7. Illi | nois | | | | Lexine | on, No | rtn car | 01188 | | . Koos | lyn, V | A. |
|--|------------------------|------------|--------------|--------------------------|--------|----------|---------|--------|---------|-------|--------|-----------------|------------------|------------------|-----------------|------------------|----------|-------------|----------|
| and Hybrids | | 1922- | - 1 | 1922-23 | | 1929–30 | | : | 1930-31 | | | 930-31 | : | | 931-32 | | | 931-32 | |
| | | : Ros- : 1 | Moe- : | Ros- : Mos ette : elc | : Ros- | : Gr. | Tel. | : Ros- | Gr. : | Yel. | Ros- : | Gr. : Mos. : | Yel. : Mos. : | Ros- : ette : | Gr. : Mos. : | Tel. : Mos. : | Ros- : | Gr. Moe. | Te Mo |
| LECTIONS FROM HYBRIDS AND VARIETIES | | 5 | \$ | * \$ | 4 | \$ | g. | * | \$ | 4 | 5 | 5 | 5 | 16 | 5 | 5 | 5 | 5 | |
| rimean X Fults | 1919 Arl. Farm No. 8 | _ | _ | 0 T | _ | - | - | _ | _ | _ | _ | _ | - | _ | _ | _ | - | _ | |
| rimean X Fults | * * * 68 | - | - | 0 35 | | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| imean X Fults | | - | - | 0 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| imean X Fults | | 0 | 0 | T T | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| imean X Fults | | 0 | 0 | T T | - | - | - | - | - | - | - | - | - | - | - | - | | - | |
| imean I Poole | 28 | 0 | 0 | 7 75 | - | - | | - | - | - | - | - | - | - | - | - | - | - | |
| imean X Poole | | - | - | 0 50 | - | - | - | - | - | ~ | - | - | - | - | - | - | - | - | |
| imean X Poole | * * * 39 | - | - | 0 0 | - | - | - | - | - | - | - | - | - | - | - | | - | - | |
| imean X spelt | m m m 26 | - | - | 0 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| rell I Fults | 17 | 0 | 0 | T 7 | _ | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| rell Prolific X Pults | * * * 15 | _ | | 0 7 | | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| rell Prolific X Fults | * * * 16 | _ | | 0 7 | _ | | _ | - | _ | - | - | - | - | _ | _ | - | | | |
| rell Prolific X Fults | * * * 15 | | - | 0 7 | | | | - 5 | | | - 5 | - | - | | | - 5 | | | |
| rell Prolific X Fulte | * * * 19 | _ | _ | 0 7 | | | | | _ | - | | - | | - | - | _ | | - | |
| rell Prolific X Fults | * * * 21 | _ | - | 0 7 | - | _ | | _ | | | | | | | _ | | | | |
| rell Prolific X Fults | 22 | - | _ | 0 7 | - | | | | | _ | _ | _ | | | | | - | | |
| rell Prolific X Fults | 23 | - | - | 0 7 | - | _ | _ | - | | - | - | | _ | - | | - | _ | - | |
| rell Prolific X Fults | | - | - | 0 T | | - | - | | - | - | - | - | - | - | | - | - | - | |
| ts I Poole | 82 | - | - | O T | - | - | - | - | - | - | - | - | - | - | - | - | - | - | |
| essee Giant I Shepherd | B 46-6 | - | - | | - | - | - | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 9 | - | - | |
| dden I Dewson | | - | - | | 0 | 3 | 0 | - | - | - | - | - | - | - | - | | - | - | |
| inois selection | Ill. Ste. Sel. 131 | - | - | | - | - | - | 0 | 5 | 0 | - | - | - | - | - | - | - | - | |
| red X Herd Federetion Sel. 285195 | Ean. R47-1930 | - | | | - | - | - | 0 | 80 | 0 | - | - | - | - | - | - | - | - | |
| red I Hard Federetion Sel. 254634 | Kan. R44-1930 | - | - | | - | - | - | 0 | 5 | 0 | - | - | - | - | - | - | - | - | |
| red X Rard Federetion | Kan. 2675 | - | - | | - | - | - | - | - | - | - | - | - | 0 | 0 | g | 0 | 0 | |
| red X Rard Federation | Enn. 2672 | - | - | | - | - | - | - | - | - | - | - | - | 0 | 0 | .5 | 0 | 0 | |
| red X Hard Federation red X Hard Federation | Kan. 2671 | - | - | | - | - | - | - | - | - | - | - | - | 0 | 0 | 50 | 0 | 0 | |
| red I Hard Federation | Ean. 516 | - | - | | - | - | - | - | - | - | - | - | - | 0 | 0 | 78 | T | T | |
| red I Marquis | Kan. 2673 | - | - | | - | - | - | - | - | - | - | - | - | 0 | 0 | 10 | 0 | T | |
| red I Marquis | Kan. 2644 Kan. 2679 | - | - | | - | - | - | - | - | - | - | - | - | 0 | 0 | 77 | 0 | 0 | |
| red X Fulcestar | 30-1-3-394 (Maine) | - | - | | 0 | 22 | - | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 0 | 0 | |
| oxvills 40) Red Rock | C. I. 5597 | - | - | - | 0 | T | 0 | 0 | 0 | 0 | 0 | 0 | U | - | - | - | - | - | |
| ozville 1929) T2 Sherbakoff Sel. | 0. 1. 5591 | - | - | | 0 | 50 | 0 | - | - | - | - | - | | - | - | - | - | - | |
| oxville 1929) Til Sherbakoff Sel. | | _ | - | | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | - | - | - | - | - | |
| oxville 1929) Tl3 Sherbakoff Sel. | | - | - | | 0 | lı b | | 0 | 0 | 0 | 0 | 5 | 0 | - | - | - | - | - | |
| oxville 218) Prelude Sel. 352-7-2-1 | | - | - | | 0 | | 0 | - | - | - | - | - | - | - | - | - | - | - | |
| man Sel. No. 3 (1926) | 1929 Swan. R. 532 | - | - | | 0 | 75 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | - | - | - | - | - | |
| man Sel. No. 3 (1926) | # # R. 568 | - | - | | ŭ. | 7 | 0 | 0 | 0 | 0 | 6 | 6 | 0 | - | | - | - | - | |
| akof X Bittany 215al-13 | n e R. 288 | _ | - | | 0 | 0 | 100 | U | 0 | U | 0 | 0 | U | - | - | - | - | - | |
| akof I Bittany 215e7-22 | n n R. 425 | | - | - | o | 0 | 100 | - | - | - | - | - | _ | - | - | - | - | - | |
| akof I Blue Ridge 2110a3-32 | # R. 428 | | - | | 0 | 100 | 100 | - | - | - | - | - | - | - | - | - | - | - | |
| hardi X Minturki Colby | 0. 1. 8034 | _ | - | | - | 100 | | 0 | 100 | 0 | - | - | | | | | | _ | |
| hardi X Minturki Colby | C. I. 8215 | _ | _ | _ | - | | _ | ő | 100 | ő | | | - | _ | - | - | | - | |
| turki X (Belogina X Buffum) Colby | O. I. 8033 | _ | | | _ | | _ | 0 | 100 | o | _ | _ | - | _ | | _ | | _ | |
| lude X Kanred | C. I. 8386 | - | _ | - | - | _ | | n | 0 | ñ | _ | | | 0 | 0 | 8 | 0 | m m | |
| pleetraw 1915 X Red Rock R76-3 | RR 1088 | _ | - | | - | _ | - | ō | | o | 0 | 5 | 0 | _ | - | | - | - | |
| plestraw 1915 X Red Rock R76-3 | RR 422 | - | - | | - | - | - | 0 | 98 | 0 - | 0 | 65 | 0 | - | - | - | - | - | |
| pleetraw 53 X K19-47R41-4 | | - | - | | - | - | - | 0 | 98 | 0 | 0 | 99 | 0 | - | - | - | | - | |
| plestrew X P1066-1 208s3-36-2 | 1929 Swen. No. 68 | - | - | | O. | 0 | 0 | 0 | 0 | o | 0 | T | 0 | - | - | - | - | - | |
| Plestrew I P1066-1 208s3-36-1 | 64 | - | - | | 0 | 7 | 0 | 0 | 0 | 0 | 0 | T | 0 | 0 | 0 | 10 | - | - | |
| plestrew X P1066-1 208a3-3-3 | | - | - | | 0 | 3 | 0 | 0 | 0 | 0 | 0 | T | 0 | - | - | - | - | - | |
| plestrew X P1066-1 208a3-56-3 | # # 190 | - | - | | 0 | 0 | 99 | - | - | - | - | - | - | - | - | - | - | - | |
| rpleetraw X P1066-1 208e3-36-3 | s s 187 | - | - | | 0 | 14 | 0 | 0 | 0 | 0 | 0 | T | 0 | 0 | 0 | 10 | - | - | |
| plestraw X P1066-1 208a7-9-2 | | | - | | 0 | 0 | 97 | - | - | - | - | - | - | - | - | | - | - | |
| plestraw X P1066-1 208s7-12 plestraw X P1066-1 208s7-43-6 | * * 356 * * 320 | - | - | | 0 | 0 | 50 | - | | - | - | - | - | - | - | | - | - | |
| plestraw X P1066-1 20887-83 | | - | - | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | T | 0 | 0 | 0 | 17 | - | - | |
| pleetraw X P1005-1 208a/-83 | " 365 " 369 | - | - | | 0 | 0 | 12 | 0 | 0 | 0 | - | - | - | - | - | - | - | - | |
| pleetraw X P1066-1 208e7-130-12 | 1 1 302 | - | - | | 0 | 0 | 100 | 0 | 0 | 0 | - | - | - | - | - | - | - | - | |
| pleetraw X P1066-1 2023a2-22-16 | 323 | | - | | 0 | 0 | 100 | - | - | - | - | - | - | - | - | - | - | - | |
| pleetraw X P1066-1 2023a3-1-2 | 1 1 92 | - | - | - | 0 | 0 | 100 | | - | | | | | | | | | | |
| Dleetraw X P1066-1 2023a2-16 | 1 1 372 | - | - | | 0 | 0 | 100 | - | _ | _ | | - | _ | - | - | _ | | - | |
| pleetraw X Flood-1 2023a2-10 | 31- | | - | | - | - | 100 | 0 | 10 | 0 | 0 | 25 | 0 | | | - | | - | |
| 2-9 % Gipsy L. 2036a5-162-3 | | - | - | | 0 | 99 | 0 | _ | 10 | - | _ | - 7 | _ | - | - | | - | | |
| -9 % Gipsy L. 2036a5-52-4 | | - | - | | ő | 90 | ő | - | - | - | - | - | - | - | - | - | - | - | |
| -9 I Gipey L. 2036a5-47-1 | | - | - | | 0 | 0 | 100 | - | - | - | - | - | - | - | - | - | - | - | |
| 2-9 X Gipsy L. 2036a5-46-2 | | - | - | | 0 | ŏ | 97 | - | - | - | - | - | - | - | | - | - | - | |
| 2-9 X Gipsy L. 2036a5-46-1 | | - | - | | o | o | 98 | - | - | _ | - | - | - | - | - | - | - | - | |
| 2-9 I Gipsy L. 2036a2-89-4-4 | | - | - | | ő | ŏ | 100 | - | - | - | - | - | - | - | - | - | - | - | |
| 2-9 X Gipsy L. 2036a2-89-5-3 | | - | - | | ő | ŏ | 99 | - | - | - | - | - | - | - | - | - | - | - | |
| 2-9 I Gipsy L. 2036a3-89-4-3 | | - | - | | 0 | 100 | 0 | - | - | - | | - | - | - | - | | | - | |
| 2-9 X Gipsy L. 2036s2-61-2-2 | | - | - | | ō | 0 | 100 | - | | - | - | - | - | - | - | - | - | - | |
| 2-9 X Mediterrenean 2034e11-1-16 | | - | - | | 10 | 10 | 100 | - | - | - | - | | - | - | - | - | - | - | |
| | | | | | | | - | | | | | | | | | | | | |
| veet Queen (control) | Edwardsville, Ill. | 7-75 5 | r <u>-75</u> | 85-99 85- | | 99-100 | T | 50-98 | 50-98 | 7 | 30-100 | 30-100 | T | 5-100 | 5-100 | 5-100 | 0 60-100 | 60-10 |) |
| teny (control) | C. 1. 6882 | - | - | | 0 | 25-50 | 25-50 | 0 | 48-50 | 48-50 | 0 | 5-50 | 5-50 | - | - | - | - | - | |
| Winter spelt (control) | C. I. 1772 | | | | 0 | 25 | 75 | | | | | | | 0 | | 50-65 | 0 | 20-25 | |

1-11

Reaction of wheat varieties, selections, and hybrids to mosaic and mosaic-rosetts

| | | : | Gran | ite Cit; | y, Illii | noie | | : | Lexing | ton, B | forth Ca | arolina | | Rossl | yn, Vir | gini |
|---|----------------------------------|-------------|-----------------------|------------|----------|----------------|-------|--------|----------------|-----------|----------|---------|-------|--------|---------|------|
| Class, Varieties, Selectione | Source of Seed | | 1929-3 | 0 | | 1930-31 | | : | 1930-31 | | 2 | 1931-32 | 2 | ! | 1931-32 | |
| | | | | : Yel. | | | | | : Or. : | | | | | | | : Ye |
| LECTIONS FROM HYBRIDS AND VARIETIES | | 4 | * | * | * | * | 5 | * | * | * | * | * | * | * | * | |
| 762-9 X Minn. 924 2037a7-100-3 | | 0 | 95 97 | 0 | _ | - | - | | _ | - | _ | - | - | - | _ | |
| '62-9 X Winn. 924 2037s7-116-1 '62-9 X Winn. 924 2037s7-100-1 | | 0 | | 0 | - | - | - | - | - | - | - | - | - | - | - | |
| 62-9 X Mediterranean 2011al-144-1 | | 0 | 50 | 100 | | _ | _ | - | _ | - | _ | _ | _ | _ | - | |
| 62-9 % Red Rock 2010a7-88-25 | | ō | 0 | 35 | - | - | _ | _ | _ | _ | _ | - | _ | _ | _ | |
| 62-9 X Red Rock 2010a3-73-1-3 | | 0 | 0 | 100 | - | - | - | - | - | - | - | - | - | - | - | |
| 62-9 X Red Rock 2010m7-73-1-1 162-9 X Red Rock 2010m7-4-3-1 | | 0 | 0 | 99 99 | - | - | - | - | - | - | - | - | - | - | - | |
| 62-9 X Red Book 2010e7-4-1-1 | | 0 | 0 | 100 | | | | | - | - | | | | - | | |
| 62-9 X Red Rock 2010a3-85-2 | | ō | ő | 10 | - | - | _ | _ | _ | - | _ | _ | _ | - | _ | |
| 62-9 X Red Rock 2010a3-75-2 | | T | 7 | 99 | - | - | - | - | - | - | - | - | - | - | - | |
| 62-9 X Sel. in 5639 2013a3-74-2 62-9 X Velvet Chaff L 2012a3-91-1-1 | | 0 | 6 | 100 | 0 | 0 | 0 | 3 | 3 | 0 | - | - | - | - | - | |
| 066-1 X Super 207a7-96-23 | | 0 | 0 | 98 | - | _ | - | - | _ | - 5 | | - | - | - | | |
| .066-1 % Prelude 206a2-2 | | ō | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | - | - | |
| 1066-1 X Jersey Fults 209al1-27-15 | | 0 | 0 | 100 | - | + | - | - | - | - | - | - | - | - | - | |
| 066-1 % Gladden 2032a3-25-30 | | 114 | 14 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | - | - | - | - | - | |
| 066-1 X 0ladden 2032a11-24 | | 10 | 10 | 0 | - | - | - | - | - | _ | - | _ | - | _ | _ | |
| 066-1 X Gladden 3032a3-25-24 | | 10 | 10 | 13 | _ | _ | _ | _ | _ | - | - | _ | _ | - | _ | |
| 066-1 X Gladden 2032a2-105-1-2 | | 0 | Ť | 0 | 0 | 0 | 0 | T | 7 | 0 | - | - | - | - | - | |
| .066-1 % Gladden 2032a3-74-1 .066-1 % Gladden 2032a3-90-5 | | 2 | 8 | 0 | - | - | - | - | - | - | - | - | - | - | - | |
| 066-1 X Grand Price L 2026a2-35-1 | | 0 | 3 | 0 | 0 | 0 | 0 | 0 | | 0 | | - | | - | - | |
| 066-1 X Grand Priss L 2026a2-3-2 | | ő | o | 8 | _ | _ | - | - | - | _ | | _ | _ | - | _ | |
| 066-1 % Grand Priss L 2026a2-1-4 | | Ó | 0 | 10 | - | - | - | - | - | - | - | - | - | - | - | |
| 066-1 % Grand Price L 2026a1-60-2-1 066-1 % Grand Price L 2026a1-3-1-2 | | 0 | 0 | 95 | - | - | - | - | - | - | - | - | - | - | - | |
| 066-1 X Valley L 2018all-24-7 | | 0 | 0 | 99 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 10 | _ | _ | |
| 066-1 X Valley L 2018a3-53-4-1 | | o | 7 | 0 | ő | o | o | Ť | Ť | ő | - | - | - | _ | - | |
| 066-1 X Walley L 2018s3-53-2-1 | | 0 | 0 | 60 | _ | - | _ | - | _ | - | - | - | - | - | - | |
| 066-1 % Valley L 2018a3-53-1-1 1066-1 % Valley L 2018a3-15-1-2 | | 0 | 0 | 100 | | - | - 0 | - | la. | - | - | - | - | - | - | |
| 066-1 X Valley L 2018a3-15-1-1 | | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 3 | 0 | - | - | | - | | |
| 066-1 X Burbank | Ean. No. 2654 | - | | + | _ | - | - | - | 2 | - | 0 | 0 | 42 | 0 | 0 | |
| 1068-1 X Fulcaster 203ml-38 | | 0 | 30 40 | 0 | | | - | - | - | - | - | _ | - | - | - | |
| 068-1 X Fulcaster 203a2-7-1 068-1 X Leap 202a13-72-4 | | 0 | 140 | 0 | - | - | - | - | - | - | - | - | - | - | - | |
| 068-1 X Leap 202al3-18 | | 0 | 12 | 0 | - | - | - | - | - | - | - | - | - | - | | |
| 065-1 X Leap 202a12-25-19 | | ő | 3 | ő | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | - | _ | |
| 068-1 X Leap 202a7-13-3 | | 0 | | 0 | - | - | - | - | - | - | - | - | - | - | - | |
| 065-1 X Leap 202a6-3-9 065-1 X Leap 202a4-5-5 | 1000 8 | 0 | 95 5 | 0 | 0 | - | - | - | - | 0 | 0 | - | | - | - | |
| 068-1 X Leap 202a4-8-5 | 1929 Swan. No. 593 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | T | 10 | _ | - | |
| 068-1 X Leap 202al-8-5 | * * Wo. 400 | 0 | 3 | o | - | - | - | | - | _ | _ | - | _ | _ | - | |
| 065-1 % Falcaster 203a2-15-2 | | 0 | 20 | 0 | - | - | - | - | - | - | - | - | - | - | - | |
| 1065-1 % Fulcaster 203s2-5-5 .065-1 % Fulcaster 203s2-7-3 | | 0 | 9 | 0 | - | + | - | - | - | - | - | - | - | - | - | |
| 068-1 X Fulcaster 203a2-44 | | 0 | 99 10 | 0 | - | _ | | - | - | - | _ | - | - | | | |
| 068-1 X Fulcaster 203a2-18-3 | | ō | 0 | 100 | | | _ | | - | - | - | _ | _ | _ | - | |
| 068-1 % Fulcaster 203a2-37-3 | | 0 | 0 | 100 | - | - | - | - | - | - | - | - | - | - | - | |
| .065-1 X Fulcaster 203a2-45-3 065-1 X Fulcaster 203a2-51-1 | | 0 | 0 | 100 | - | - | - | - | - | - | - | - | - | - | - | |
| 065-1 % Fulcaster 203s2-51-2 | | 0 | 0 | 100 100 | | - | - | - | - | - | ~ | - | - | - | _ | |
| 068-1 X Fulcaster 203a2-51-3 | | ō | o | 100 | | - | _ | _ | - | _ | - | | | - | - | |
| 066-1 X Fulcaster 203a2-51-5 | | 0 | 0 | 100 | | - | - | - | - | - | - | - | - | - | - | |
| .068-1 X Fulcaster 203a2-55-6 068-1 X Fulcaster 203a2-90-1 | | 0 | .5 | 0 | - | - | - | - | - | - | + | - | - | - | - | |
| 068-1 X Fulcaster 203a2-63-4 | | 0 | 95 | 96 | _ | - | - | - | - | | _ | - | | - | - | |
| 065-1 X Fulcaster 203a2-96-4 | | ő | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 7 | _ | - | |
| 068-1 X Fulcaster 203a2-95-3 | | 0 | 9 | 0 | - | - | - | - | - | - | | - | - | - | - | |
| 068-1 % Fulcaster 203a2-96-5 068-1 % Fulcaster 203a2-124-1 | | 0 | T | 0 | 0 | 0 | 0 | 0 | Ť | 0 | 0 | 0 | Ť | - | - | |
| 068-1 X Fulcaster 203a2-124-3 | | 0 | 0 | 100 -99 | - | - | - | - | - | _ | - | - | - | _ | - | |
| 068-1 X Fulcaster 203a2-124-4 | | ő | ő | 100 | - | - | - | - | _ | - | _ | - | _ | - | - | |
| 068-1 X Fulcaster 203a2-124-5 | | 0 | 0 | 99 | - | - | - | - | | - | - | - | - | - | - | |
| 068-1 X Fulcaster 203a2-124-6 068-1 X Fulcaster 203a11-50 | | 0 | 0 | 99 | - | - | - | - | - | | - | - | - | | - | |
| .065-1 X Fulcaster 203a2-144-2 | | 0 | 0 | 99 | - | - | - | - | - | - | - | - | - | - | - | |
| 068-1 X Fulcaeter 203a2-126-3 | | 0 | 20 | 0 | _ | _ | - | - | - | - | - | - | - | - | _ | |
| 068-1 X Genesses Giant L 2052a4-63-1-5 | | ō | 100 | 0 | - | - | - | - | - | - | - | - | - | - | | |
| 1068-1 X New Amber Longberry L 2055al-5-2-1 1068-1 X New Amber Longberry L 2055al-18-2-4 | | 0 | 0 | 100 | - | - | - | - | - | | - | - | - | - | - | |
| ed Hall Sel. 296710 | Kan. R 1743 | 0 | 0 | 100 | 0 | 100 | 0 | - | - | | - | - | - | - | - | |
| ising Sun Hybrid R 89-93 | mm. n 114) | - : | - | - | 0 | 98 | 0 | 0 | 95 | 0 | - | - | - | - | - | |
| | | | | | - | | | | | - | | | | | | |
| arveet Queen (control) ittany (control) | Edwardsville, Ill. C. I. 6882 | 99-100 0 | 99-100 25-50 25 | 25-50 | 50-98 | 50-98 48-50 | 48-50 | 30-100 | 30-100 5-50 | 9 5-50 | 5-100 | 5-100 | 5-100 | 60-100 | 60-10 | 0 |
| | | | | | | | | | | |) - | | | | | |

2-43

Reaction of wheat varieties, selections, and hybride to mosaic and mosaic-rosette

| | : | Wanate | h, Ind. | : | | Grani | te City | . Illin | oie | | 1 | | Lexin | ston, W | orth Ca | relina | 1 |
|--|---|----------|----------------|--------------------|------------|------------------|-----------------------|-------------|-------------------|------------------|---------|------------------|---------------|---------|-----------|------------------|------------------|
| Clase, Varieties, Selections and Exbride | Source of Seed | 1922 | -23 | 1922 | -23 | 19 | 29-30 | : | 1 | 930-31 | : | 1 | 930-31 | | 1 | 1931-32 | 1 |
| end Hange | 1 1 | : Ros- : | Mos- eic | Ros- : | Mos- | Ros- : | Gr. : Mos. : | Yel. : | Ros- : | Gr. : Mos. : | Yel. : | Ros- : | Gr. | Yel. | Ros- | : Gr. : | Yel. : Mos. : |
| SELECTIONS FROM HYBRIDS AND VARIETIES | | * | * | 8 | * | * | \$ | \$ | 5 | \$ | 5 | * | * | * | * | * | 5 |
| Sel. in Ricing Sun Ricing Sun Hybrid X Purplectraw G20-1 | Swan. 1929 RR 140 | - | - | - | - | 0 | 0 | 100 | - | - | 100 | - | - | 100 | - | - | - |
| Selection 131215 | Arl. 1919 No. 131218 | _ | _ | - | 60 | - | - | - | 0 | 0 | 100 | 0 | 0 | 100 | 0 | 0 | 100 |
| Selection (common) 1593 | From wheat breeding nursery, Arl. Exp. Farm | 0 | 0 | 2 | 8 | - | - | _ | _ | - | _ | | - | _ | _ | - | |
| Selection (from 4131) | | _ | - | Ô | 97 | _ | _ | _ | | | _ | _ | _ | _ | _ | | - |
| Selection 131058 | | _ | _ | ő | 27 | | _ | _ | _ | - | - | _ | _ | _ | _ | - | |
| Selection 131156 | | - | - | ō | - | - | _ | _ | - | - | _ | - | - | - | - | - | - |
| Selection Row 393 in 1918 | | 100 | - | 0 | Ť | - | - | - | - | - | - | - | - | - | - | - | - |
| Selection Row 408 in 1918 | | - | - | 0 | 60 | - | - | - | - | - | - | - | - | - | - | - | - |
| Texas 3015-106 | | - | - | - | _ | 0 | 0 | 98 | - | - | - | - | - | - | - | - | - |
| Texas 3015-63 | | - | - | - | - | 0 | 0 | 100 | - | - | - | - | - | - | - | - | - |
| Texas 3015-25 | | - | - | - | - | 0 | 95 | 0 | - | - | - | - | - | - | - | - | - |
| Teras 3015-4 | | - | - | - | - | 0 | 3 | 0 | - | - | - | - | - | - | - | - | - |
| Texas Sel. Wo. 3015-105-4 | | - | - | - | - | - | _ | - | 0 | 100 | 0 | - | - | - | - | - | - |
| Turkey Sel. Colby | C.I. 6152 Kan. No. 2466 | - | - | - | - | - | - | - | 0 | 100 | 0 | - | - | - | - | - | - |
| Harvest Queen (control) Wittary (control) Rod Winter spelt (control) | Edwardswills, Illinois C. I. 6852 C.I. 1772 | T-75 | T-75 - - | 85 - 99 | 85-99 - | 99-100 0 0 | 99-100 25-50 25 | 25-50 75 | 50-98 0 | 50-98 48-50 k | 50 - | 30-100 0 - | 30-10 5-50 | | 5-10 0 | 0 5-100 25-35 | 5-100 50-65 |
| Miles - | | | | | | | | | | | | | | | | | |

Hots:

During the past two seasons the following wheats have been found to be extremely susceptible to mosaic or to mosaic-rosette in commercial fields in Illinois and Indiana;

Hardy Fulte Illinois Progent No. 2 Michigan Amber (Red May) Perfection (Currell) Purkof Winter Fife

mosaic-resetts mosaic mosaic mosaic mosaic mosaic-rosetts

Mason county, Ill. Logan, Mason, and Taswell counties, Ill. Euntington county, Ind.

Huntington county, Ind.
Logan, Edgar, and Clark counties, Ill.
Macon county, Ill.



